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ABSTRACT

A study examined student participation in work experience and workplace learning programs using 1996 and 1997 data from the Longitudinal Surveys of Australian Youth on a cohort first sampled in 1995 when students were in year 9. Findings related to work experience programs revealed few differences between students who took part in work experience and those who did not; participation was widespread in most states; girls were slightly more likely to participate; most students participated in the programs for 1 or 2 weeks; and students with part-time jobs who participated in work experience saw the job as more useful for general employment skills. Findings related to workplace learning programs indicated school participation in the programs continued to rise; school provision was highest in the government sector and lowest in the independent school sector; a high proportion of schools provided a workplace learning program, but student participation was not as widespread; non-English-speaking-background students were much less likely to participate; year 11 students most likely to participate were those who lived in rural or remote areas, whose parents did not complete secondary school, and who were employed in skilled trades or unskilled occupations; students in the programs were more likely to be those who achieved lower literacy and numeracy levels in Year 9. (Contain 21 references, 14 tables, and 3 figures.) (YLB)

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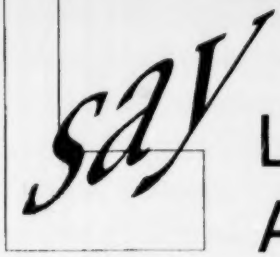

Longitudinal Surveys of Australian Youth

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Research Report Number 10

Work Experience and Work Placements in Secondary School Education

Sue Fullarton

June 1999

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- Lamb, S. *Completing School in Australia: Trends in the 1990s.* (LSAY Research Report No. 1). Melbourne: ACER, September 1996.

- Robinson, L. *School Students and Part-Time Work* (LSAY Research Report No. 2). Melbourne: ACER, October 1996.

- Marks, G. & Ainley, J. *Reading Comprehension and Numeracy among Junior Secondary School Students in Australia* (LSAY Research Report No. 3). Melbourne: ACER, March 1997.

- Lamb, S. *School Achievement and Initial Education and Labour Market Outcomes* (LSAY Research Report No. 4). Melbourne: ACER, July 1997.

- Marks, G. *Attitudes to School Life: Their influences and their effects on achievement and leaving school* (LSAY Research Report No. 5). Melbourne: ACER, September 1998.

- Fleming, N. & Marks, G. *Well-being among Young Australians: Effects of work and home life for four Youth in Transition cohorts.* (LSAY Research Report No. 6). Melbourne: ACER, September 1998.

- Marks, G. & Fleming, N. *Factors Influencing Youth Unemployment in Australia: 1980-1994.* (LSAY Research Report No. 7). Melbourne: ACER, September 1998.

- Marks, G. & Fleming, N. *Youth Earnings in Australia: 1980-1994: A comparison of three youth cohorts.* (LSAY Research Report No. 8). Melbourne: ACER, September 1998.

- Robinson, L. *The Effects of Part-time Work on School Students.* (LSAY Research Report No. 9). Melbourne: ACER, March 1999.

- Fullarton, S. *Work Experience and Work Placements in Secondary School Education.* (LSAY Research Report No. 10). Melbourne: ACER, May 1999.

The *Longitudinal Surveys of Australian Youth* (LSAY) study the progress of several cohorts of young Australians between school, post-secondary education and training and work. The oldest cohort was born in 1961, while the youngest was a nationally representative sample of Year 9 students selected in 1998. The information from the surveys is used to provide a picture of what young Australians are doing and how this picture changes both as the cohort gets older and compared with other cohorts. More detailed investigations look at the links between social characteristics, education and training, and employment. Issues investigated in the LSAY project include school completion, participation in vocational and university education, part-time work, unemployment, earnings and school achievement. The project is commissioned by the Department of Education, Training and Youth Affairs (DETYA).

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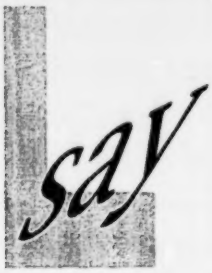

Longitudinal Surveys of Australian Youth

Research Report Number 10

WORK EXPERIENCE AND WORK PLACEMENTS IN SECONDARY SCHOOL EDUCATION

Sue Fullarton

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EXECUTIVE SUMMARY

Australian schools are placing an increasing emphasis on giving students direct knowledge of the world of work. This is happening in two main ways: through the long-established practice of work experience programs; and through the more recent development of structured workplace learning under the umbrella of vocational education and training (VET) in schools.

This report is based on 1996 and 1997 data from the Longitudinal Surveys of Australian Youth (LSAY) program. It provides the most recent and comprehensive national estimates of the number of Year 10 and Year 11 students participating in work experience and workplace learning programs, and the amount of time involved. It also provides extensive information on the characteristics of the young people concerned – their gender, social background, achievement in literacy and numeracy, school sector, and geographic location. Such information provides important baseline data for evaluating the coverage and impact of such programs.

The report also includes some indicative material on the outcomes of such programs. Students were asked to assess the relative benefits of participating in work experience programs and the more direct way of learning about the world of work – actually having a part-time job.

Work Experience

Work experience programs commenced in Australia in the late 1960s and are now offered by most secondary schools. These programs typically involve students in a relatively short period of attending a workplace, observing operations, and engaging in some straightforward tasks under supervision. Work experience students normally receive a small daily allowance while in the workplace. It is comparatively uncommon for schools to integrate work experience programs into the teaching and learning program in a structured manner. Work experience is essentially intended to give students a "taste" of the world of work.

The LSAY surveys revealed that the majority of students participated in work experience in Year 10 or Year 11, and that there were few marked differences between the students who took part in work experience and those who did not. Participation in work experience programs in Year 10 and Year 11 was widespread in most states, ranging from 96 per cent in South Australia to 66 per cent in Queensland;

- Girls were slightly more likely than boys to participate in work experience programs at both Year 10 and Year 11;

- Students at independent, non-Catholic schools were slightly less likely to participate in work experience programs than students in Catholic or government schools;

- Most students in both Year 10 and Year 11 participated in these programs for either one or two weeks;

- Students with part-time jobs who participated in work experience saw the part-time job as more useful for general employment skills such as working with other people, confidence and following instructions, and the work experience as being useful for looking at work conditions and skills required for particular jobs. The latter finding may be due to the fact that students often work part-time in jobs in which they do

not intend to make their career, whereas the choice of a work experience site may be more purposive.

Workplace Learning Programs

Workplace learning programs are generally more ambitious in scope. Such programs, which have started to expand rapidly in Australia in recent years, normally involve students spending an extended period of time in a workplace focused on acquiring occupationally specific skills and knowledge. Such programs are usually intended to help students gain qualifications that lead either directly to the labour market or to vocational studies at tertiary levels. Programs organised around workplace learning are also often seen as a way to broaden the appeal of senior secondary schooling, and to help engage students who may not be suited to, or interested in, more academically-oriented areas.

Workplace learning programs are relatively new in Australian schools, and often involve comparatively small numbers of students. In a related sense, there are a great variety of different programs provided among, and within, the States and Territories. As such, participation in workplace learning programs is difficult to survey in a reliable manner, and the results need to be interpreted in a cautious manner.

The survey results are based on a nationally representative sample of 300 secondary schools attended by the LSAY cohort of young people. The results mostly refer to 1997, when the large majority of the students were in Year 11.

- School participation in workplace learning programs continues to rise. In 1997 around 67 per cent of secondary schools provided some form of workplace learning program, up from 62 per cent of schools in 1996 and 46 per cent in 1995.

- School provision is highest in the Government sector (68 per cent of schools) and lowest in the independent school sector (64 per cent).

- Although a high proportion of schools provide some form of workplace learning program, student participation is not as widespread. In 1997 only 8 per cent of Year 11 students participated in a workplace learning program.

- Non English-speaking background (NESB) students are much less likely (5 per cent) to participate than students from an English-speaking background (8 per cent).

- The Year 11 students most likely to participate are those who live in rural or remote areas (11 per cent of students from this background), whose parents did not complete secondary school (9 per cent), and who are employed in skilled trades or unskilled occupations (9 per cent).

- Year 11 students in workplace learning programs are more likely to be those who achieved lower levels of literacy and numeracy in Year 9 than those who achieved at higher levels. This suggests that workplace learning programs may be succeeding in opening up opportunities for young people who may have difficulties with much of the senior school curriculum. This finding also implies that continuing attention may need to be paid to the general education skills of students in workplace learning programs.

Work Experience and Work Placements in Secondary School Education

INTRODUCTION

One of the important developments in recent years in Australian schooling has been the introduction and growth of workplace learning programs, in which Year 11 and 12 students participate in structured workplace learning that is a recognised formal part of their course. Although there is some information about the extent and nature of these programs (see Ainley & Fleming, 1997) little is known about the participants or outcomes of these programs. These programs are sometimes, but not always, part of the provision of vocational education and training in senior secondary schools.

Government policy is now giving renewed attention to education for work (including work experience) in the junior secondary years. Work experience programs have been a feature of the Year 10 curriculum for at least 20 years but there is no current evidence on a national basis of the extent of these programs.

This report examines the extent of students' participation in work experience, school-industry, and other workplace learning programs. It draws on 1996 and 1997 data relating to a nationally representative sample of young people who were first sampled in 1995 when they were in Year 9. These analyses will provide information relevant to the design and implementation of workplace learning in its various forms. The results will also provide the basis for later studies of the educational and labour market destinations of participants that will be undertaken through the LSAY research program.

The presentation and discussion of the analyses is divided into two sections. The first presents an overall picture of participation in work experience programs and an examination of students' beliefs about the value of these programs. The second examines participation in a variety of workplace learning programs, followed by a multivariate analysis modelling participation with a number of demographic variables.

BACKGROUND

The primary orientation of senior secondary schooling has traditionally been the preparation of students for university. In 1985, the release of *The Victorian Ministerial Review of Postcompulsory Schooling* (Blackburn, 1985), and similar reports issued at around the same time in other States, proposed a marked shift in philosophy when it recommended that ideally all young people should remain in full-time secondary education until the end of Year 12, and that the appropriate program for all students at that level should be "general" in the sense that it should be broad-based, drawn from a range of curriculum areas, and should provide all students with opportunities for experiential and independent learning. The Blackburn and other official reports in the mid-1980s explicitly rejected the provision of separate curricula streams or institutions at the senior secondary level.

Arising from a combination of factors such as government policies aimed at boosting school retention, reforms to curricula and assessment, increased tertiary education provision, and a weakening youth employment market, retention rates began to rise in Australia from the early 1980s. The percentage of students completing secondary school in Australia increased dramatically from 35 per cent in 1980 to a peak of 77 per

cent nationally in 1992. This marked rise in school retention prompted reconsideration of the emphasis of senior secondary schooling. Only about 30 per cent of this age cohort typically proceeded to university directly from Year 12, and many had no intention of doing so. Questions started to be asked about the relevance of a general secondary school curriculum for the increasing proportion of Years 11 and 12 students not interested in pursuing a university education.

This question has been brought into sharper focus by the decline of the apparent Year 12 retention rate to 71 per cent in 1997. It may well be that there are a percentage of students who are finding that their needs are not being met by the current school curriculum. In the Ministerial Statement introducing the *Modern Australian Apprenticeship and Traineeship System (MAATS)*, since renamed *New Apprenticeships*, D. David Kemp argued that:

> young people must be provided with appropriate education and training opportunities that improve their employment prospects. The fact that 30 per cent of students are not completing Year 12 is a clear indication that school curriculum is not providing all students with relevant and valued learning choices. (1996, p.9)

While it may be simply that these students are exercising freedom of choice, there is substantial evidence that students who do not complete Year 12 and do not go directly into full-time employment are marginalised from the labour market and from further education (Sweet, 1995; Marks & Fleming, 1998). This marginalisation can manifest itself in a number of ways; unemployment, part-time work that is poorly paid and allows little access to further training[1], and completely dropping out of work and education. For governments, early school leavers contribute to the growing problem of youth unemployment. As a result, measures have been taken that actively discourage students from leaving school early, such as the abolition of unemployment benefits for 16 and 17-year-olds, and moves to broaden the curriculum at the senior secondary level. It is important that secondary schools provide opportunities for a number of different groups of students; tertiary-bound students, students who wish to remain at school because there is no alternative or simply because they are not sure of their path after school; those who at present are drifting away from the education system.

A recent OECD report on Australia, *The Transition from Initial Education to Working Life* (Hasan, McKenzie, Nexelmann, & Schwartz, 1997) reiterated this theme, and argued that changes in programs should include improving students' work-related skills and helping them become more competitive by increasing their exposure to the world of work. It was further recommended that this be achieved by broadening the current focus of secondary education by integrating aspects of academic and vocational education and making these available to all secondary students, not by returning to the days of a separate vocational stream. Alternative pathways, such as vocational education and training, could be seen as an attempt to make the curriculum more inclusive and attractive to all students. Students have shown support for these attempts by increasingly enrolling in subjects that are not directly oriented towards university (Ainley, Robinson, Harvey-Beavis, Elsworth & Fleming, 1994).

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[1] The *Training and Education Experience Survey* (Australian Bureau of Statistics, 1993) shows that full-time permanent employees are more than seven times as likely to participate in external training programs than casual part-time employees.

To provide these learning choices, a number of programs aimed at further developing the pathways from school to work have been implemented in Australian schools.

Broad Types of Programs

Work Experience

In the past, many students left school as early as possible, and in most cases had opportunities to sample a range of different jobs before finally settling on a particular path (Dwyer, 1995). With rising unemployment, however, this is no longer possible, and indeed such behaviour is actively discouraged by government policy. Work experience programs, therefore, provide a little of the flavour of a particular job whilst students are still participating in full-time education.

Work experience programs began in Australia in the late 1960s (Cole, 1979, p.31) and have been a feature of the Year 10 curriculum since the early 1980s. Work experience is a program of relatively short duration that enables students to become actively involved in gaining first hand experience and a broad awareness of the world of work, and to develop and test career choices in the actual workplace.

A national sample of students surveyed in 1986 as part of the ACER *Youth in Transition* project indicated that approximately 84 per cent of 16 year-old students had participated in work experience programs. These data were consistent with those from reviews of work experience programs in Victoria (Ministry of Education, 1988) and in Queensland (Hobbs, 1982). There is, however, no current evidence on a national basis of the extent of provision of work experience programs, or of the characteristics of students who participate in such programs. The present report aims to fill this gap.

Work Placement

Work placement programs are a more recent innovation and aim to facilitate the development of linkages between schools, students and businesses. Work placement programs are of a more extended duration than work experience and allow students to acquire skills and competencies in a workplace setting, generally as part of a vocational education and training (VET) program. Ministers have endorsed the value of VET students engaging in high quality structured workplace learning as part of their secondary education. Again, however, there is no current evidence on a national basis of the extent of provision of such programs, or of the characteristics of students who participate in such programs.

School-industry Programs

Neither work experience nor work placement programs, however, lead to a vocational credential nor are they related to endorsed national competency standards (Department of Education, 1998). One of the most important developments in recent years has been the introduction and growth of school-industry programs, in which Year 11 and Year 12 students participate in structured workplace learning that is a recognised formal part of their course. Such programs have been structured to achieve competencies endorsed within the National Training Framework and provide credit towards a credential within the Australian Qualifications Framework. Although there is some information about the extent and nature of these programs (see Ainley & Fleming, 1997), little is known about the participants or the outcomes of such programs.

To examine participation in work experience and work placement programs, this report uses data collected as part of the Longitudinal Surveys of Australian Youth in 1996 and 1997, and background data collected in the initial survey in 1995. In particular, the focus of this report will be the examination of:

- participation in work experience and in workplace learning programs;
- characteristics of participants in each of these programs; and
- students' opinions of the value of particular aspects of work experience programs compared with the value of a part-time job in the same year.

Details on the data and the variables used are provided in Appendix 1.

WORK EXPERIENCE

Participation in Work Experience by State

As illustrated in Table 1, participation nationally in work experience programs is high (approximately 84 per cent of students). These data show a slight decline in participation rates from the *Youth in Transition* (YIT) survey of 1986. In Victoria and South Australia participation is almost universal, and nationally, 20 per cent of students participate in work experience programs in both Year 10 and Year 11. However, there are large variations by State, for example approximately one-third of students in Queensland and one-quarter of the students in Western Australia and the Australian Capital Territory do no work experience at all.

Table 1 Participation in Work Experience Programs in Year 10 (1996) and Year 11 (1997), by State

State	Participation in work experience programs (%)		
	Year 10	Year 11	Neither Year *
Australian Capital Territory	49	45	24
New South Wales	80	26	12
Victoria	81	31	6
Queensland	20	54	34
South Australia	55	89	4
Western Australia	63	35	24
Tasmania	73	24	21
Northern Territory	76	23	16
Total	**62**	**44**	**16**

* Note: Students with missing data for these questions in either Year 10 or Year 11 were excluded from this calculation.

Table 2 Student Participation in Work Experience Programs by Various Background Factors, 1996 and 1997

	Participation in Work Experience Programs (%)		
	Year 10	Year 11	Neither Year
Gender			
Male	61	42	19
Female	62	45	14
Type of School Attended			
Government	62	45	16
Catholic	63	38	17
Independent	58	44	16
Place of Residence			
Metropolitan	60	42	17
Regional	62	44	15
Rural	64	46	15
Country of Birth			
Australia	62	44	16
Other	60	37	19
Home Language			
English	61	44	16
Non-English	66	35	16

Participation in Work Experience: Influence of Background Factors

Table 2 provides a breakdown of participation in work experience programs by a variety of background factors. Statistically significant differences were found for gender, type of school attended and size of place of residence at both Year 10 and Year 11, for country of birth in Year 11, and for home language in Year 10. These findings and their implications will be discussed in the following sections.

Gender

Girls were found to be more likely to participate in work experience programs at both Year 10 and Year 11, and consequently their overall participation rate is about 5 percentage points higher than that for male students. The reasons for this gender difference are not obvious. It may be that there are more work experience opportunities available in occupations or industries that appeal to girls rather than boys. It may also be that because boys tend to leave school earlier than girls, either to obtain an apprenticeship or a job (Marks & Fleming, in press), those boys who remain at school feel less strongly about seeking out work experience opportunities than do the larger proportion of girls who remain at school. Whatever the reasons involved, the fact that more female students than male students work part-time and have more participation in work experience, suggests that a fair proportion of male school students are receiving little exposure to the world of work.

Participation by School Sector

Participation rates for work experience were found to be similar in all school sectors, a change from the results reported in Ainley & Fleming (1997) which indicated that participation at independent schools was much lower than at government or Catholic schools. This finding may indicate an increasing convergence in the extent to which schools from the different sectors feel that it is in their students' interests to participate in work experience. However, within this broader finding, students from independent, non-Catholic schools were found to be significantly less likely to participate in work experience programs in Year 10, and students from Catholic schools were significantly less likely to participate in work experience at Year 11.

Interaction between Gender and School Sector

Of some interest is the interaction between school sector and gender. It can be seen from Figure 1 that girls in Year 10 in independent schools are much more likely than their male counterparts to participate in work experience programs, as are the boys at Catholic schools in Year 10 and the girls at Catholic schools in Year 11. It is only in the government school system that there are no significant gender differences in participation rate at either year level. The fact that non-government schools are much more likely than government schools to be single sex rather than co-educational suggests that the different pattern of participation by school sector and gender reflects decisions made by particular non-government schools rather than differentiation between male and female students within the one school.

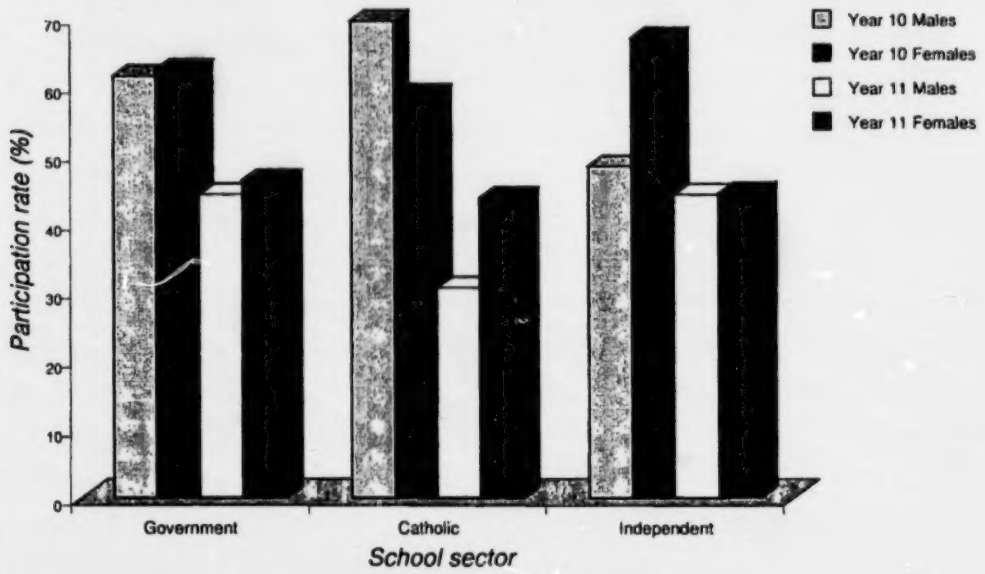

Figure 1 Participation Rates by Gender and School Sector

Figure 2 Work Experience Participation Rates by Place of Residence and School Sector

Place of Residence

Participation rates were found in general to be slightly higher for students in government and Catholic schools in rural and regional areas than for those in metropolitan areas. For independent schools, participation is similar in metropolitan and rural areas, but lower in regional areas (Figure 2). The fact that participation in work experience programs tends to be slightly higher in rural and regional areas may reflect both supply and demand factors. Strong local networks may mean that employers are more willing to offer work experience opportunities. The fact that fewer students from rural and regional areas go on to tertiary study may make them more interested in seeking out work experience opportunities while still at school.

These differences were found to be largely associated with school type and gender. For government schools there were non-significant differences in participation rates for males and females at a particular year level within each of the regions. However for Catholic and independent schools, different results emerged. These differences are shown in bold in Table 3. For boys in metropolitan Catholic schools, work experience is much more likely to be conducted in Year 10 than Year 11, while the distribution over Years 10 and 11 is more even for girls. Among students in independent schools, girls in Year 10 appear to be participating in work experience programs at a much greater rate than boys, perhaps indicating that it is independent girls' schools that have embraced work experience programs to a greater extent than independent boys' schools.

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Table 3 Participation Rates by Gender, School Type and Location of Residence

	Metropolitan		Regional		Rural & Remote	
	Year 10	Year 11	Year 10	Year 11	Year 10	Year 11
School sector						
Government						
Males	59	41	65	45	63	49
Females	60	44	65	47	66	50
Catholic						
Males	**71**	**30**	65	34	71	30
Females	**56**	**50**	63	34	63	28
Independent						
Males	**46**	43	51	52	58	39
Females	**76**	44	47	46	62	43

Time in the Workplace

Time spent in the workplace for work experience was measured for the Year 10 students in weeks. The range was from one to eight weeks, with the mode being one week (60 per cent of those participating in work experience). A further 36 per cent of students had a placement of 2 weeks in the workplace, and only 1 per cent of students participated in the program for more than four weeks.

Time was measured in days for the Year 11 students, and it was found that the range was one to 60 days, while the average number of days work experience was 7.2. The modal value was five days (67 per cent of students) and again the second most common was 10 days (12 per cent). These data are summarised in Table 4.

There were differences in time spent in work experience programs by the school sector. In both Year 10 and Year 11, students at independent schools were more likely to spend a single week at work, with fewer numbers participating for extended periods. Overall, though, work experience programs typically provide only a "light" exposure to the world of work.

Perceived Value of Part-time Jobs and Work Experience

Forty-four per cent of all students were employed on a part-time basis after school during Year 10, and it was found that more females than males were employed (47 per cent of females, 41 per cent of males). These results are consistent with findings reported from previous surveys by Robinson (1996, p. 8).

Table 4 Time Spent in Workplace for Work Experience, Year 10 (1996) and Year 11 (1997)

	Year 10 (%) N = 5599	Year 11 (%) N = 3669
Time in weeks		
1	60	73
2	36	16
3	2	4
4	1	2
More than 4	1	5

Of interest for this report were students' opinions of the things their work experience programs taught them, compared to the perceived value of employment in a part-time job in the same year. For both participation in work experience and part-time work, students were asked to respond on a four-point scale to the questions:

How much did work experience (your part-time job) teach you about:

- what work is really like
- getting along with other people
- following instructions
- thinking for yourself
- being confident
- particular skills needed in that job
- working conditions
- the career you would like after school

Table 5 provides the mean score on the scale for beliefs about the relative value of part-time work and work experience for those students who participated in both programs and were therefore able to provide a comparative opinion on both. Twenty-nine per cent of students indicated that they participated in a work experience program in Year 10 and held a part-time job during that same year.

The data shown in Table 5 indicate that students believe that both work experience programs and part-time jobs provide a realistic lesson of what work in general is really like. With higher values for the mean representing a higher level of learning for the particular item, it can be seen that students believe part-time jobs are better for learning to get along with people, learning to follow instructions, thinking for oneself and increasing confidence. This could well be because of the greater time period involved in part-time work as opposed to the more intensive, but shorter, period for work experience.

Table 5 Mean Ratings for Beliefs* about the Value of Work Experience and Part-time Employment, Year 10 Students, 1996

Item	Work Experience	Part-time Job
What work is really like?	3.48	3.44
Getting along with other people?	3.47	3.54
Following instructions?	3.56	3.64
Thinking for yourself?	3.38	3.50
Being confident?	3.49	3.55
Particular skills needed in that job?	3.55	3.50
Work conditions?	3.51	3.45
The career you would like after school?	3.10	2.31

* *These items are rated on a four-point scale where 4 = quite a bit, 3 = a fair bit, 2 = not much, 1 = nothing, so the higher the mean, the more positive the assessment of the experience.*

Work experience, on the other hand, is perceived to be more useful for learning about the particular skills needed and work conditions of a particular job, and for learning about the career in which the student might be interested after completing school.

These results may reflect the differing value in participation in part-time work and in work experience programs. Part-time work is often both a means of achieving some form of financial independence and a means of improving post-school employment prospects by demonstrating aptitude for work, not necessarily in the same field. On the other hand, work experience is considered to be an opportunity to be actively involved in a particular job in which a student may be interested, and to investigate the skills required for that job.

WORKPLACE LEARNING

Workplace Learning Programs

Workplace learning programs require senior secondary students to spend some time in a workplace setting in a manner that is recognised and accredited as part of their formal studies. Workplace learning programs are relatively new in Australian schools, and often involve comparatively small numbers of students. In a related sense, there are a great variety of different programs provided among, and within, the States and Territories. As such, participation in workplace learning programs is difficult to survey in a reliable manner, and the results need to be interpreted in a cautious manner. Appendix 1 provides information on the way in which this information was obtained in the LSAY survey.

It was noted by Ainley & Fleming (1997) that in 1996, 62 per cent of schools provided workplace learning programs, a growth of 16 percentage points since 1995. The current data on a sample of 301 schools nationally indicate continued growth to 67 per cent in 1997, a rise of a further 5 percentage points.

Table 6 Percentage of Schools Providing Workplace Learning Programs by School Sector, 1997

Sector	Percentage of Schools Providing Program
Government	68
Catholic	66
Independent	64

Table 6 contains details of the provision of workplace learning programs by school sector. It can be seen from this table that while participation rates are higher in government schools, differences between the sectors are small. This suggests a similarity of views among schools in the different sectors about the value of such programs.

Participation in Workplace Learning Programs

Table 7 shows the overall participation rate by schools in the provision of workplace learning programs, and provides a breakdown by State and by a number of background factors.

State of Residence

Participation rates are highest in South Australia, Western Australia and the Northern Territory, and lowest in Victoria and the Australian Capital Territory. This is noteworthy, given that less than half of the South Australian schools in the sample (19 schools) but over 70 per cent of Victorian schools in the sample (44 schools) offered workplace learning programs.

Gender

Although there is a slightly higher proportion of males participating in school-industry programs, these differences are not statistically significant.

School Sector

Significant differences were found in participation rates by school sector. It can be seen that students in government schools have a slightly higher participation rate than students in either Catholic or non-Catholic independent schools.

Home Location

The area in which the student lives also influences participation in workplace learning programs, with students in rural and remote areas being more likely to participate than those in metropolitan areas. The possible explanations discussed earlier about the higher participation by rural and remote students in work experience programs could also apply to this finding.

Table 7 Participation Rates for Workplace Learning Programs, Year 11 Students

Variable	Participation Rate (%)
State/Territory	
Australian Capital Territory	5
New South Wales	8
Victoria	4
Queensland	8
South Australia	12
Western Australia	9
Tasmania	8
Northern Territory	9
Gender	
Male	8
Female	8
School Sector	
Government	9
Catholic	7
Independent	6
Place of residence	
Metropolitan	7
Regional	9
Rural & remote	11
Home language	
English	8
Other	5
Parent's occupation group	
Upper professionals	5
Lower professionals	7
Skilled	9
Unskilled	9
Parental education	
Higher education	6
Technical qualifications	8
Completed secondary school	8
Some secondary school	9
Achievement level	
Highest quartile	5
Middle 50 per cent	8
Lowest quartile	12
Planned post-school study	
Yes	7
No	12
Type of post-school study planned	
University course	5
Apprenticeship	11
Other TAFE course	12

Student Background Factors

Students from a non-English speaking background are less likely to participate in workplace learning programs, while students whose parents did not complete secondary school and are employed in skilled or unskilled occupations are amongst those who are most likely to participate. Students whose parents have higher education qualifications and are employed in professional occupations are the least likely to participate. These factors suggest, not surprisingly, that students whose home backgrounds are not oriented to tertiary study, are more likely to participate in structured workplace learning while still at school. Although this can be interpreted as evidence that schools are responding to the broader student population that they now serve, if it is eventually found that the workplace learning programs do not, in fact, lead to strong labour market outcomes, equity concerns may be raised.

Participation in workplace learning programs was highest among those students who scored in the lowest quartile in achievement in maths and reading, and declined as achievement increased. Correspondingly, participation rates were lower for those students who indicated their plan to continue with further study than for those who had no such plans, and was higher for students who planned to undertake vocational training than for those who planned to undertake university courses.

These findings suggest that workplace learning programs may be succeeding in opening up opportunities for young people who may have difficulties with much of the senior school curriculum, and who are not oriented to university study. The fact, though, that relatively high numbers of students with low literacy and numeracy performance are participating in such programs implies that continuing attention may need to be paid to the general education skills of students in workplace learning programs.

As the participation rates are generally very low, some caution should be taken in the interpretation of results and comparisons in this area.

Multivariate Analysis

A logistic regression analysis was conducted to examine the likelihood of participation in workplace training programs, given particular patterns of response to other variables. Logistic regression is a technique that allows one to estimate the probability of an event occurring or not, after controlling for all other factors. For example, using this technique it is possible to identify the chances of a female student participating in such a program compared to a male student, all other factors equal. A more detailed discussion of this analysis can be found in Appendix 2.

The results of this analysis can also be found in Appendix 2, based on the participation of a 'typical' individual. This 'typical' student, against which others are compared, was male, English-speaking background, with unskilled parents who had some secondary schooling, from a government school in a metropolitan area, in the middle 50 per cent band of achievement. Of course, it should be noted that this analysis is only relevant comparing with this particular control individual. Appendix 2 also provides logistic regression results from an alternate model and it can be seen that the impact of various demographic factors is fairly stable. For this discussion, however, the regression coefficients from the first model have been used to calculate the probability that a 'typical' individual will participate in workplace learning programs.

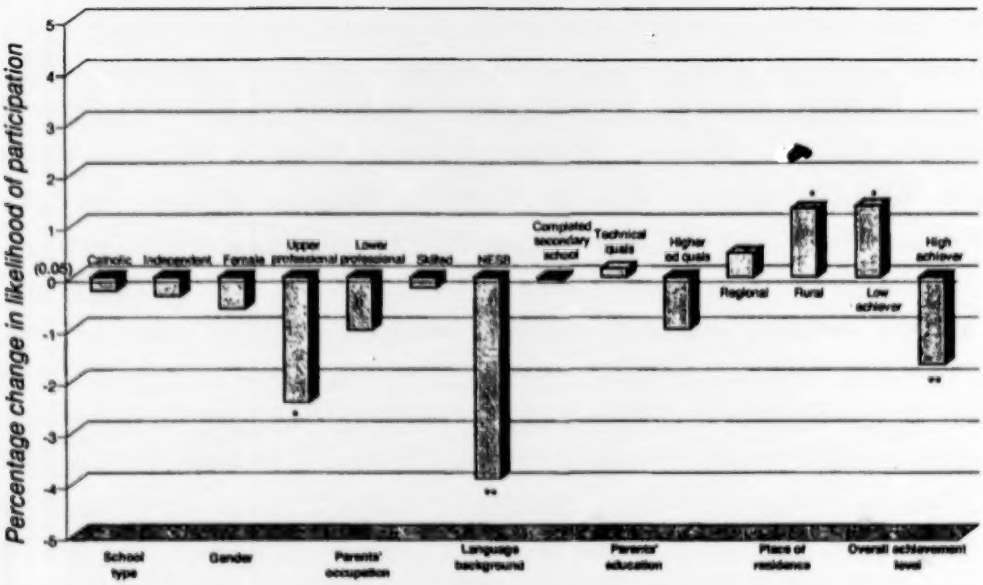

Figure 3 Probability of Students Participating in Workplace Learning Programs

(* $p < .05$, ** $p < .01$)

The probability that the 'typical individual' for the first logistic regression will participate in a workplace learning program was calculated to be 0.05 (see Appendix 2 for details of this calculation). The probability of any variation on this was calculated and plotted with reference to this base probability, and this is presented in Figure 3. If the probability of participation is greater for a particular group than that for the 'typical' student, the bar is plotted above the x-axis. If the probability is lower, the bar falls below the x-axis. Statistically significant differences are marked by asterisk to indicate their level of significance.

It is clear from Figure 3 that students from a non-English speaking background are much less likely to participate in workplace learning programs than those with an English-speaking background, other factors equal (this can be seen to be only half as likely from the regression coefficients in Appendix 2).

Students whose fathers were employed in an upper professional job were also significantly less likely to participate in workplace learning programs. However parental levels of education were not found to have a significant effect on participation, other things equal.

Students in rural areas were found to be significantly more likely to participate in workplace learning programs than metropolitan students; however no significant differences were seen for the students in regional areas.

The student's school achievement level was found to be a significant factor in the likelihood of participation in a workplace learning program. Students in the middle two quartiles of achievement are, other things equal, 1.4 times more likely to participate than students from the highest achievement quartile, while the students in the lowest quartile are in turn 1.4 times more likely to participate than these "average" students.

Participation in workplace learning programs has now been examined in some detail. The next section of this report examines the provision of, and participation in, particular types of workplace learning programs. As noted several times already, caution needs to be exercised in interpreting these results because of the small numbers of students involved in some types of program. For this reason, the results are presented at the national level only, and are not disaggregated by State.

Workplace Learning Programs Available

Schools were asked whether they offered one of the following workplace learning programs:

- externally initiated business partnerships (e.g. E-Team, Young Achievers Australia)
- Transition Education (i.e. workplace learning programs for students with disabilities)
- Work Studies (e.g. New South Wales)
- Work Education (e.g. Queensland, Tasmania)
- Dual Recognition (e.g. Victoria)
- TAFE accredited programs
- Industry Studies, Content-Endorsed Course (e.g. New South Wales)
- TRAC (Training in Retail and Commerce)
- INSTEP (Innovative Skills Training and Education Program)

Table 8 shows the most commonly offered programs nationally at the time that this survey was undertaken, and the percentage of schools offering these particular programs, by school sector. It can be seen that the Business Partnerships program was the most commonly offered in all three school sectors.

Table 8 Percentage of Schools Offering Major Workplace Learning Programs (Year 11)

		School Sector		
Name of Program	All schools	Government	Catholic	Independent
Work Studies	12	16	6	3
TRAC	16	18	14	8
INSTEP	10	11	8	5
Work Education	5	7	2	0
Business partnerships	36	35	34	44
Dual Recognition	11	13	4	10

Table 9 Participation Rates for Students in Major Workplace Learning Programs

		School Sector		
Name of Program	All schools	Government	Catholic	Independent
Work Studies	10	11	10	4
TRAC	9	10	6	6
INSTEP	6	8	1	1
Work Education	6	6	1	8
Business partnerships	3	3	2	5
Dual Recognition	1	1	0	0
N	670	471	115	84

Table 9 shows the participation rates by school sector for students in the workplace learning programs with the highest participation rates. These participation rates are calculated as a percentage of those participating in workplace learning programs, not of the whole sample.

These data indicate that while the Business Partnerships program appears to be that offered by the majority of schools, it is not the program most often taken up by students. The Work Studies programs have the highest participation rates for students in government and Catholic schools, while students in other independent schools are more likely to participate in Work Education.

Field of Training

Students were asked to indicate the field of study for their workplace training program, and these were grouped firstly under the *Australian and New Zealand Standard Industrial Classification* (ANZSIC) (Australian Bureau of Statistics (ABS), 1993). Due to the relatively low participation rates in workplace training programs in general, these were then collapsed into broad areas defined by Ainley & Fleming (1997). These broad areas and the collapsed groups are shown in Table 10, along with the participation rates by gender and for all students.

There were no significant gender differences found in rate of participation in school-industry programs overall. However, it can be seen in Table 10 that male students did participate in programs in a broader range of industries than female students. For example, female students are much less likely than male students to be participating in agriculture, building or anything to do with manufacturing or engineering, while almost 20 per cent of males participate in programs in these industries.

Particularly evident from the LSAY data is the small number of students of either gender participating in newer employment areas such as information technology, electronics or engineering. This is not readily apparent from Table 10 because of the manner in which the fields of study have been collapsed. It would appear that the majority of students are participating in school-industry programs that are much the same as the jobs in which young adults are normally employed (Meyer, 1988).

Table 10 Percentage Representation in Industries, by Gender

Group	Industry Division	Participation Rate (%)		
		Males	Females	All students
Group 1	Agriculture, forestry & fishing Mining	6	0	3
Group 2	Building and Construction	6	1	3
Group 3	Manufacturing Metals and Engineering Electronics Trade Mechanical	6	0	3
Group 4	Transport and storage Utilities (electricity & gas)	0	0	0
Group 5	Retail & wholesale trade Automotive (retail motor) Office / clerical Broad-based commercial Finance and insurance Property and business services Government administration	28	38	33
Group 6	Hospitality Tourism	13	23	18
Group 7	Education Health & community services Arts, entertainment, recreation Personal & other services Service sector Communication (inc. information technology)	22	22	22
Group 8	Other	20	15	18

Other data, however, (Polesel & Teese, 1997) indicate that students are increasingly undertaking placements in areas such as Information Technology, and new programs in fields such as desktop publishing, printing and multi-media are being developed. Such increases should be treated with some caution, however, as while they indicate high growth it is from a low base.

Time spent in the Workplace

As with work experience programs, length of participation ranged from one day to 100 days in the workplace, however the most common length of time was 5 days (20 per cent of students). The modal length of time (Table 11) spent in the workplace varied by program.

Table 11 Time Spent in Workplace for Workplace Learning Programs

Name of Program	Mean Number of Days	Modal Number of Days
Work Studies	15	5
TRAC	25	28, 30
INSTEP	30	15, 24, 25, 40, 80
Work Education	13	5
Business partnerships	6	5

Home Location

The students' place of residence was found to be a significant factor in participation in school-industry programs. Students from rural and remote communities were more likely to be participants in workplace training programs (11 per cent participation rate) than students in regional areas (9 per cent) or in metropolitan areas (7 per cent). Table 12 shows the proportion of schools in each type of location that offers particular programs.

Reasons for Participation in Workplace Learning Programs

Students were asked to indicate their main reasons for participating in the workplace learning program. Multiple responses were accepted. Forty per cent of the students responded that they would like to do that kind of work in the future, and just over 20 per cent answered more broadly that it was the kind of business they would like to work in. Other reasons that students gave were that the program was compulsory (17 per cent), or that it would help them get a job in the future (12 per cent).

Some Outcomes of Workplace Learning Programs

Assessing the outcomes of workplace learning programs is problematic. However, an unpublished report examining the 1997 and 1998 destinations of students enrolled in one particular workplace learning program, the VET in Schools program in Victoria, (Polesel & Teese, 1997) may provide some insights into outcomes.

It was estimated by Sweet (1995) that about 30 per cent of school leavers do not go on to either further education or full-time work. However, in the Polesel and Teese (1997) study, it was found that only 6 per cent of their cohort (Year 12 students enrolled in VET in Schools programs) were unemployed and 7 per cent were in part-time work. The authors argue that these results indicate that "the difficulties generally faced by this group of school leavers may be attenuated by the successful completion of a program of studies which included VET in Schools courses" (p. 11).

Table 12 Participation Rate in Major School-industry Programs, by Students' Home Location

Name of Program	Participation Rate (%)		
	Metropolitan (over 100 000)	Regional (1 000 – 99 000)	Rural and remote (< 1000)
Work Studies	9	8	13
TRAC	6	8	16
INSTEP	5	9	5
Work Education	6	4	7
Business partnerships	3	3	2
Dual Recognition	1	2	0
N	320	82	168

The completion of such courses may also encourage students to be more aware of the possibility of enrolling in further studies at a TAFE institution. A large proportion of the students in the Polesel & Teese (1997) study went on to further study: approximately 20 per cent at university and 33 per cent in VET courses, primarily at TAFE. These data may indicate that workplace learning programs are successful in targeting students who might otherwise have left school and joined the large pool of unemployed youth. Certainly they are valuable in terms of teaching students how to fit into the work environment, and how to work collaboratively with other people.

Future LSAY reports will investigate the education and labour market outcomes of participation in workplace learning programs, and how these compare with the outcomes of similar students who did not participate in such programs.

CONCLUSION

It was apparent that there was no current evidence on a national basis of the extent of provision of either work experience programs or other more formal workplace learning programs, nor of the characteristics of the students who participated in these programs. Using data from the *Longitudinal Surveys of Australian Youth* project, this report has made a contribution to the provision of information in this area by investigating the participation in both work experience and in workplace learning programs at Year 10 and Year 11 in Australian schools. The study also contrasted students' beliefs about the value of their experiences in part-time jobs and during work experience.

This report found that participation in work experience programs was widespread at both Year 10 and Year 11 throughout Australia, although it was found to vary from State to State. Girls and students from government or Catholic schools were most likely to participate in these programs. Comparing the benefits of part-time work and work experience, students who had participated in both generally felt that part-time jobs were more useful for the development of general employment skills, while work experience programs provided more of an experience useful for looking at the skills required and conditions of a particular job.

The number of schools offering students participation in workplace learning programs continues to grow. While these results should be treated with some caution given the low participation rates, a number of tentative conclusions can be drawn about participation in these programs. Participation rates are greatest in the government school sector, amongst students in rural and remote areas, and particularly among students in the lowest achievement quartiles in reading and numeracy.

These results suggest that programs which include workplace learning are attracting students who may not be well suited to, or interested in, more academically-oriented parts of the senior secondary curriculum. This is a noteworthy result, given the finding that completion of Year 12 has long-term employment benefits even for those who perform poorly in literacy and numeracy at school (Marks & Fleming, 1998). However, if school programs that emphasise workplace learning are to eventually attract significant numbers of students, it will be important that they also provide pathways into quality employment and further learning opportunities. This issue will be the focus of future LSAY research as the Year 11 students in the present study progress through education and into the labour market.

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APPENDIX 1: DATA AND ANALYSIS

Data

The data used in this report was derived from the second and third waves of the 1995 Year 9 *Longitudinal Surveys of Australian Youth* (LSAY) project. This is a research project, conducted by the Australian Council for Educational Research (ACER), which investigates the changing educational and labour force participation of different age groups of young people. In 1995, an initial national sample of over 13,000 Year 9 students was established by a two stage probability sample with schools randomly selected and then classes within schools randomly selected.

These students completed reading comprehension and numeracy tests and completed a small questionnaire. This questionnaire collected data on the students, their perceptions of their progress at school, their educational plans, their attitudes to school, their teachers, the relevance of school and their opinions on their school work as well as information on their social backgrounds.

The second wave of the LSAY sample was conducted in 1996 when most of the students were in Year 10 and the third wave in 1997 when most students were in Year 11. Mail and telephone surveys in these years collected data on their education labour market and family situations.

The variables

A number of background and educational variables were used in the analysis of these data. The family background variables include gender, language background, home location, parents' educational level and parents' occupational status. Educational characteristics include school type, achievement level, and post-school intentions.

Language background

This refers to the language mostly spoken at home, with two categories: English or non-English.

Home location

Home location was classified as either metropolitan, with population greater than 100 000; regional, with a population between 1 000 and 99 000; and rural or remote communities, with a population of less than 1 000 people.

Parents' educational level

This was based on the fathers' highest level of education. If this information was missing, mothers' highest level of education was used. Four categories were defined: didn't complete secondary school, completed secondary school (but no further qualifications), trade or technical qualifications, and higher education qualifications.

Parents' occupation

Parents' occupation was based on fathers' occupation, unless this was missing, in which case mothers' occupation was used. Four categories were defined:

- Upper professionals and managers
- Lower professionals, paraprofessionals and technicians
- Skilled trades, clerks, sales, farmers and
- Unskilled: sales assistants, plant operators, labourers

School type

This variable measured attendance at a government school, a Catholic school or a non-Catholic independent school.

Achievement level

Achievement was measured by standardised tests in literacy and numeracy at the time of initial sampling of this cohort in 1995. At the time of testing, all students were divided into quartiles according to their level of achievement on these tests.

Type of post-school study

Students were asked about their plans for study after they completed secondary school, and the classification used for these analyses focussed on three categories: University, apprenticeship or TAFE course.

APPENDIX 2: ANALYTICAL PROCEDURES

Logistic regression was used for this analysis since the dependent variable (participation in program versus non-participation) is a dichotomy. Logistic regression allows one to predict a discrete outcome such as participation in school-industry programs from a set of variables that are categorical. To facilitate the multivariate analysis, dummy variables were constructed for all variables.

In the analysis of factors affecting participation in school-industry programs, the parameter estimates have been converted to odds ratios, denoting the difference in the odds of participating in the program for possession of that attribute in the case of variables such as gender. The odds ratios are the exponent of the parameter estimate, odds = exp (estimate).

The model to which other categories was compared had the following characteristics:

- Male
- Government school
- English-speaking background
- Parents in unskilled occupation
- Neither parent completed secondary school
- Metropolitan area of residence
- Middle 50 per cent combined reading and maths achievement

Probabilities were calculated using the logistic regression equation for the probability of an event occurring:

$$\text{Prob(event)} = \frac{1}{1+e^{-Z}},$$

where Z is the linear combination $Z = B_0+B_1X_1+ B_2X_2+ \ldots + B_pX_p$

The results of the analysis are shown in Table 13, which provides regression coefficients, the significance of the coefficients, and the odds ratios for each variable in the model. Few factors were found to be statistically significant at the .05 level of significance; those that were are indicated in bold.

For comparison, a second model is shown in Table 14. In this model the "typical' student has the following characteristics:

- Female
- Government school
- English-speaking background
- Parents in skilled occupation
- Parents completed secondary school
- Metropolitan area of residence
- Middle 50 per cent combined reading and maths achievement

Table 13 Influence of Social Background and Educational Characteristics on Participation in Workplace Learning Programs

Variable	Regression coefficient	Significance	Odds Ratio
Gender (compared to Males)			
Females	.14	.16	1.15
Language background (*cf* English-speaking)			
Non-English speaking	**.63**	.01	**1.89**
Parental occupation (*cf* unskilled)			
Upper professional	**.44**	.02	**1.55**
Lower professional	.21	.14	1.24
Skilled	.06	.62	1.06
Parental education (*cf* some secondary schooling)			
Higher education	.21	.12	1.24
Technical qualifications	-.02	.90	.98
Completed secondary school	.03	.83	1.03
School type (*cf* government)			
Catholic	.07	.59	1.07
Independent	.09	.54	1.09
Size of area (*cf* metropolitan)			
Regional	-.09	.46	.92
Rural	**-.31**	.01	**.74**
Achievement level (*cf* combined middle two quartiles)			
Top quartile	**.32**	.01	**1.38**
Lowest quartile	**-.32**	**.01**	**.73**

Table 14 Influence of Social Background and Educational Characteristics on Participation in Workplace Learning Programs - Alternate model

Variable	Regression coefficient	Significance	Odds Ratio
Gender (compared to Females)			
Males	-.11	.23	.87
Language background (*cf* English-speaking)			
Non-English speaking	.55	.02	1.88
Parental occupation (*cf* skilled)			
Upper professional	.43	.01	1.46
Lower professional	.19	.16	1.16
Unskilled	-.07	.53	.94
Parental education (*cf* completed secondary schooling)			
Higher education	.25	.08	1.20
Technical qualifications	.00	.99	.96
Some secondary schooling	-.04	.72	.98
School type (*cf* government)			
Catholic	.07	.57	1.07
Independent	.14	.32	1.09
Home location (*cf* metropolitan)			
Regional	-.10	.40	.92
Rural	-.32	.01	.74
Achievement level (*cf* combined middle two quartiles)			
Top quartile	.32	.01	1.38
Lowest quartile	-.32	.01	.73

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